ON

CROSS-LEGGED PROGRESSION

(SCISSOR-LEGGED DEFORMITY)

THE RESULT OF DOUBLE HIP ANCHYLOSIS

WITH AN ILLUSTRATION

BY

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ON CROSS-LEGGED PROGRESSION (SCISSOR-LEGGED DEFORMITY), THE RESULT OF DOUBLE HIP ANCHYLOSIS.

Read October 22, 1880.

THE object of this paper is to direct attention to a peculiar and characteristic gait, which is brought about by disease and consequent anchylosis of both hip-joints.

Disease of both hip-joints is rare, and recovery after such double disease so uncommon, that it is probable the deformity and peculiar mode of progression which follows may have been hitherto overlooked.

I have searched diligently in general surgical literature and in special books on deformities and pathology, without discovering any reference to this curious result of disease affecting both hip-joints in the same person.

In the two cases which I have to bring forward the disease commenced first in one hip, and had existed there for some time before the other was attacked. It is fair to conjecture, from the history, that anchylosis had taken place in the hip-joint first attacked, before the disease had progressed far in the other. The patient was allowed to walk with the aid of crutches or sticks, bearing his weight on the convalescent limb; and gradually the limb last attacked was carried across the other. I leave it open to discussion how this is brought about, whether as the result of the adduction so common in the course of hip-joint disease, or whether as a gradually-developed, perhaps unconscious, action on the part of the patient, with the object of placing his limbs in the position most favourable for progression. My own opinion tends to this view; the patient, when commencing to walk

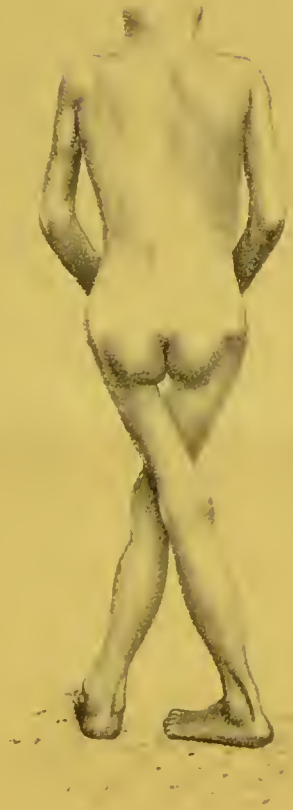
on the convalescent limb, finds that by resting the other limb upon it, he can steady the inflamed hip and prevent the movements which cause him pain. At the same time, by the oblique position, the limb is shortened and rendered less liable to touch the ground. When walking with the aid of crutches upon the recovered limb, the popliteal space of the other lower extremity rests upon the patella, and the limb thus supported swings from the knee. As recovery goes on in the second hip, the patient from time to time tests its condition by dropping the supported foot to the ground and bearing a little weight upon it. Gradually he takes more and more weight from the crutches, still retaining the limb in the oblique position, and finally, the second hip having become anchylosed, he is able to throw aside his crutches and walk in the peculiar manner which these two patients illustrate.

It is interesting to note how the patient thus finds out for himself the only position in which it is possible to walk unaided when both hips are anchylosed. For, supposing them to become fixed and parallel, it will be found that the movement of the knee is useless for forward progression, and that the only way in which advance can be made is by twisting first one side of the body, then the other, to the front.

The patient in the cross-legged position walks from his knees, using these joints in lieu of his hips. For ordinary walking, the forward movement takes place entirely from the hip, and the bending of the knee serves only to shorten the limb and prevent the foot striking the ground when it is carried forward. Hence a man with an anchylosed knee-joint is seen to lean to the sound side and carry the stiff limb in a semicircle forward to prevent the foot striking the ground, but the stiff joint does not shorten his stride; it only gives him an awkward gait, and tires him by putting excessive strain on certain muscles, ordinarily but little employed. The knee-joint bends in the wrong direction for forward progression; and it is only by altering its direction, so that the foot points obliquely, that the forward movement is attained. In this way we get knee-walking instead of the usual hip-walking.

If we examine this mode of progression more precisely, we shall observe that when standing the toes of each foot are directed towards their own side of the body, as is usual when standing at attention; but that, owing to the legs being

1.



2.

3

Mintern Bros lith

Mr Clement Lucas's Cases of Cross-legged Progression

crossed, the toes, instead of diverging, converge, and the heels are wide apart. In taking a step, the right foot is carried obliquely forward and to the right, and the weight of the body being then thrown on the right limb, the left foot is brought forward till the toe is on a level with that of the other foot. By a succession of these movements the patient can progress with moderate speed.

The following are the histories of the two patients:—

Case I.

F. G., æt. 10, when four and a half years of age, had a fall and was subsequently noticed to limp on the left leg. He attended as an out-patient, under the care of Mr. Lucas, for two years, and was treated with weight-extension for some time, and afterwards with a leather support applied so as to fix the hip.

About fifteen months later he had another fall, after which the right leg became affected. He continued under Mr. Lucas's care until June 7, 1877, when he was admitted into the Evelina Hospital, under the care of Mr. Morrant Baker. Weights were applied to each leg. On Sept. 19 he was discharged. At this time the left thigh was found fixed on the pelvis in a position of slight flexion and adduction. There was slight movement in the right hip, and thickening of the tissues around the joints.

For twelve months after his discharge he was kept lying as much as possible. He then began to walk a little with the aid of crutches, but did not at this time cross his legs. Six months later he went into the country, where he remained four months, and on his return he was noticed to cross his legs. His general health had much improved. He was again brought to see Mr. Lucas, because his legs were, as his mother expressed it, like a 'pair of scissors' (plate i., fig. 1). When walking cross-legged he usually rested his hands on his hips.

In November 1879 it was noted that when standing he rested most of his weight on the left leg. There was some lordosis when lying, increased when standing. The pelvis moved with the thigh on both sides, but there appeared to be still slight movement in the right hip. Both hips in this boy have undergone pathological dislocation. The slight movement in the right hip remains (October 1880), and is sufficient to show that the anchylosis on this side is not osseous.

Case II.

D. P., æt. 47, first began to suffer pain in the left hip in 1870. He was at this time employed as a coal-heaver. He sought advice at St. Thomas's Hospital, and afterwards at St. Bartholomew's. Subsequently he spent thirteen months in the Dalston Infirmary. The pain extended from the hip to the knee. After leaving Dalston he tried to work a little for a year, but remained lame. Since that time he has obtained his living by hawking collar-studs and other trifles in the street.

In September 1879 he began to suffer pain in the right hip. It had formerly been his custom to rest most of his weight on this limb, but the pain now caused him to stand chiefly on the left leg. In the course of the winter he got into the habit of crossing his legs, but at first was able to unlock them at will. Later he used to unlock them at night time, when he retired to sleep, but gradually this became impossible.

It happened one day that I saw this man walking in the street, and, interpreting his condition by the light of the other case, I asked him to come to Guy's Hospital to be examined. I then found, as I anticipated, that he was suffering from anchylosis of both hip-joints, and that the peculiar cross-legged progression was the result of this double disease (plate i., figs. 2 and 3).

It will be noted that the deformity may result from totally distinct diseases of the hips: for in the boy the disease was, doubtless, ordinary pulpy or strumous synovitis, which went on to absorption of the head of the femur and dislocation, without suppuration, on each side; whereas, in the man, the disease was probably osteo-arthritis. Further, it should be observed that dislocation bears no causative relation to the deformity, as might have been concluded if the boy had been the only case seen; for though dislocation had in his case taken place on each side, the hips of the man showed no dislocation.

Report on Mr. Lucas's case of Cross-Legged Progression.

Having had an opportunity of thoroughly examining the elder of the two patients brought before the society by Mr. Lucas, we have to report that the heads of the thigh-bones are not dislocated from their sockets. Both hip-joints are firmly fixed in their abnormal positions, but whether the adhesions are capable of being broken down can only be decided by putting the patient under an anæsthetic and making the attempt, which we would recommend prior to any more serious proceedings.

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